

Flavours in Nicotine Pouches

The tobacco industry utilizes flavours to improve palatability by mitigating the bitterness of tobacco, to reduce harshness, and to facilitate inhalation.(1) Flavoured tobacco products have been used to smooth adoption among youthful starters.(2) The term “characterizing” flavour implies that a flavoured tobacco product has a distinguishable taste or aroma. The sensory perception of flavours involves three systems: gustatory (tongue taste receptors), somatosensory (mouth-feel), and olfactory (smell).(3,4,5)

The central role of the somatosensory (chemesthetic) system, which imparts mouth feel including cooling or burning sensations in taste perception, indicates that tobacco products containing cooling agents should be considered to possess a “characterizing” flavour.(6) While many nations have restricted flavours, as well as “characterizing” flavours from conventional tobacco products, cigarettes nevertheless contain a variety of flavour ingredients such as liquorice, cocoa, and sugars, although the presence of these flavouring agents are not marketed.(1)

As the revenue stream for conventional products sold by transnational tobacco companies has declined steadily over recent decades, they have introduced newer nicotine and tobacco products, such as heated tobacco, e-cigarettes, and oral forms, most notably nicotine pouches in an effort to sustain revenue. Unlike cigarettes, these emerging products are marketed in a wide variety of flavours.(7,8,9,10) Nicotine pouches, sometimes referred to as “white pouches,” are rapidly proliferating in the market.(11) They are offered by both transnational tobacco companies and numerous start-up brands. As we will illustrate below, pouches are offered in an extraordinary array of flavours. In contrast to conventional products, pouch products stimulate primarily oral gustatory and somatosensory senses with little or no olfactory component.

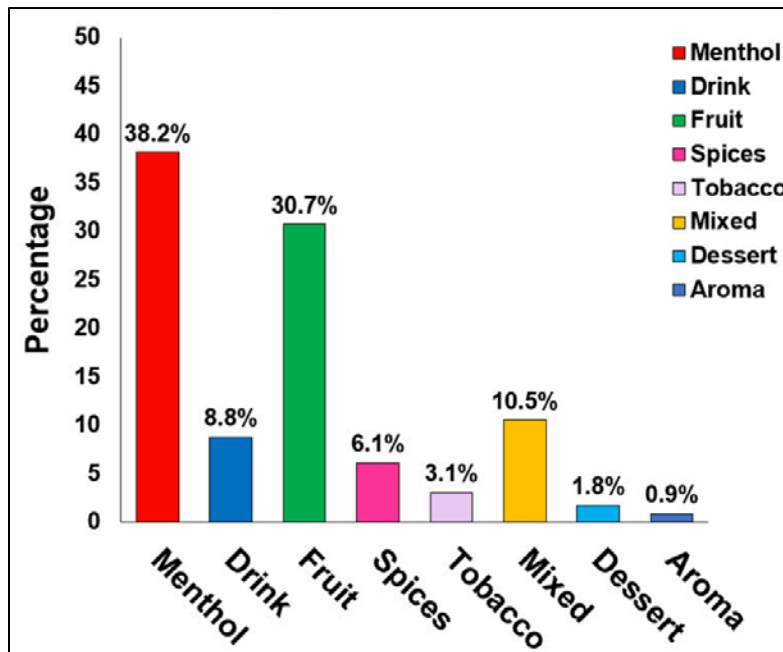
Flavour Preferences

Studies have shown that flavoured tobacco products disproportionately attract young people.(12) Flavours promote tobacco use among youthful starters and contribute to the onset of nicotine addiction.(13,14) In a cross-sectional survey of nicotine pouch use among 6131 US participants between the ages of 13 and 40, past 30-day use of flavoured varieties was examined.(15) Among 233 adolescent and young adult participants (aged 13 to 20 years), the most commonly used pouch flavours were mint/menthol varieties including “Ice” (30.5%), followed by sweet/candy (29.2%), and then fruit (23.6%). Tobacco flavoured nicotine pouches were used by only a small fraction (7.3%), with only tea flavour used less often (6.9%).

Insights into flavour preferences among e-cigarette users are provided by numerous studies of e-cigarette use. A systemic review found that adolescents consider flavours the most important factor in trying e-cigarettes.(16) Among youth e-cigarette users, fruit and sweet/candy flavours predominate.(17,18) Compared to youth, adults were more likely to use tobacco flavour.(18)

A 2023 publication reported a survey of 228 flavours among 28 nicotine pouch brands. Fig. 1 below shows the distribution of flavour products this study found on the market in Europe and the United States. Menthol (including all variants of mint) and fruit flavours predominate, with few instances of tobacco flavour.

Fig. 1 Distribution of flavour products in Europe and the United States



Shaikh SB, Newton C, Tung WC, Sun Y, Li D, Ossip D, Rahman I. Classification, Perception, and Toxicity of Emerging Flavored Oral Nicotine Pouches. International Journal of Environmental Research and Public Health. 2023 Mar 3;20(5):4526

Flavour Spectrum of Pouches by Transnational Tobacco Companies (Table 1)

Much like e-cigarettes and heated tobacco products (HTPs), nicotine pouches are offered in a wide variety of flavours spanning a number of flavour categories. In December 2022, a comprehensive online survey of flavour offerings of nicotine pouch brands identified 171 unique flavours. (See Table 1 below). This survey focused on 13 brands offered by transnational tobacco companies across 14 countries. While this survey illustrated the diverse offerings of flavoured nicotine pouches, there are innumerable smaller brands selling these products, so this inventory is likely substantially smaller than that of the broader market. As a general observation, flavours offered by small start-up brands are more likely to include dessert flavours, such as candy (e.g., bubble-gum, gummy bears). We have observed that the flavoured nicotine pouch market is dynamic, with additional flavours being continuously added.

Table 1

British American Tobacco					Philip Morris International	
Velo (47)					SHIRO (15)	
Polar Mint	Freeze	Apple Blossom	Royal Tea	Exotic Clove	Tingling Mint	Smooth Liquorice
Peppermint	Urban Vibe	Lime	Caribbean Spirit	Wild Lavender	Cooling Mint	Spiced Blonde
Ice Cool	Black Cherry	Spicy Pineapple	Coconut Blast	Eucalyptus	Sweet Mint	Tropical Passion
Spearmint	Dragon Fruit	Tropic Breeze	Gin Tonic	Elaichi Blast	Fresh Mint	Cuba Libre
Easy Mint	Citrus Burst	Mellow Mango	Amaretto	Paan Rush	True North	Pina Colada
Mint	Orange Blossom	London Flair	Tokyo Zing	Cherry Punch	Mellow Bergamot	Sour Lime
Artic Frost	Ruby Berry	Berry Frost	Cinnamon	Summer Vibes	Sour Red Berry	Virginia Classic
Winter Chill	Elderflower Spritz	Hugo	Kräuter Mix	Yellow Root	Mojito	
X-Freeze	Royal Violet	Creamy Coffee	Liquorice	Coffee	Sirius (2)	
Wintergreen	Royal Purple				Cold Classic	Ice Cold
Lyft (5)					Japan Tobacco International	
Cool Air	Yuzu Cactus	Eucalyptus & Honey	Barista Twist	Just Bloom	Nordic Spirit (10)	
Swedish Match					Smooth Mint	Berry & Stripes
ZYN (22)					Spearmint	Berry Citrus
Menthol	Ice Mint	Apple Mint	Northern Woods	Dark Frost	Bergamot Wildberry	Strawberry
Cool Mint	Freeze Mint	Chill	Ginger Blood Orange	Deep Freeze	Watermelon	Melon Square
Peppermint	Citrus	Gold	Smooth	Espressino	Elderflower	Mocha
Wintergreen	Black Cherry	Bellini	Cinnamon	Coffee	Imperial Tobacco	
Spearmint	Lemon Spritz				Skruf (12)	
Swave (16)					SOLBÄR	Fresh Max
Apple XO	Cloudberry Sour	Mojito Sun	Cuba Libre	Taste Tobacco	BJÖRNBÄR	Fresh Ultra
Green Mintini	Rhubarb Smash	Grape Punsch	Cafetini	Lemon Flip	TRANBÄR	Original
Daiquiri	Tropic Spritz	Red Surfer	Aviation	Cinnamon Heat	Polar	Red Rhuby
Sparkles					Frozen Shot	Stark
Volt (14)					Nordic	Cassise
Spearmint Breeze	Deep Freeze	Twisted Berry	Big Bang	Java Shake	Zone X (7)	
Midnight Mint	Dark Frost	Mystic Blue	Cosmic Dust	Nothingness	Cold X	Berry Fresh
Cool Crisp	Frosted Apple	Red Swirl	Zesty Citrus		Mint X	Dark Flow
Thunder (7)					Sunset	Cosmic Blast
Cool Mint	Black Max	Dark Frost	Citrus	Apple Mint	Havana Breeze	
Frosted	Deep Freeze				Swisher	
Altria					Rogue (8)	
On! (14)					Wintergreen	Berry
Wintergreen	Spearmint	Citrus	Tropical Spice	Coffee	Peppermint	Honey Lemon
Sweet Mint	Mint	Berry	Spicy Margarita	Licorice	Spearmint	Mango
Smooth Mint	Original	Lemon Berry	Cinnamon		Cinnamon	Apple

Advertising Imagery Promoting Flavoured Nicotine Pouches by Transnational Tobacco Companies

Typically, flavoured nicotine pouch advertisements are vividly coloured with the colour scheme evocative of the flavour. (See Fig. 2 below). Mint/Menthol varieties are depicted in green or blue, whereas fruit flavours are coloured to match the fruit (e.g., yellow for lemon, red for strawberries, pink for watermelon, etc.). Often, the advertisement includes an appealing image of the fruit itself.

Fig. 2 *



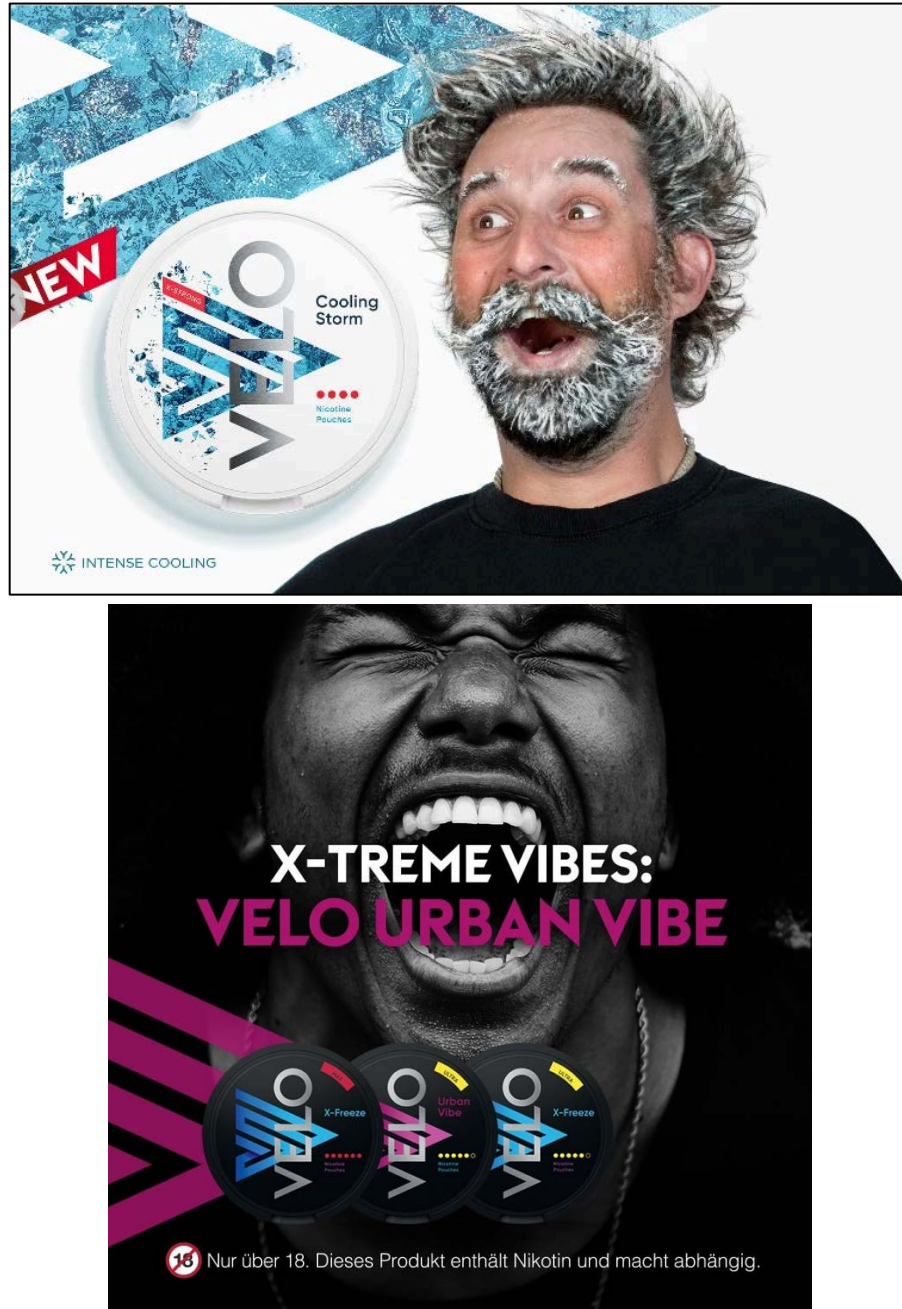
*The above information and those of later Figures are derived from research on social media

Advertising Imagery Depicting Consumer Enjoyment of Flavoured Nicotine Pouches by

Transnational Tobacco Companies

Nicotine pouch advertisements often depict not only the flavour name and its accompanying imagery (e.g., Strawberry, Gin & Tonic) but also show consumers joyfully enjoying the flavoured product. (See Fig. 3 below). Customers using VELO's Cooling Storm and X-Freeze products are shown as astounded by their powerful cooling impact.

Fig. 3



Fruit Flavoured Nicotine Pouches by Transnational Tobacco Companies

As with their advertisements, the cans containing the nicotine pouches are usually colour-coded to indicate the flavour within. Most of the flavour names are not simply the name of the fruit, but rather include an additional descriptor. (See Table 2 below). For example: Lemon Flip, Orange Blossom, Ruby Berry, Spicy Pineapple, Honey Lemon, and Sour Lime. Some flavours are evocative of an appealing sensory experience such as Tropical Passion, Tropic Breeze, Zesty Citrus, and Citrus Burst.

Table 2

BAT			Swedish Match			
VELO			ZYN	VOLT	THUNDER	Swave
Orange Blossom	Urban Vibe	Royal Violet	Citrus	Big Bang	Apple XO	
Ruby Berry	Black Cherry	Royal Purple	Black Cherry	Red Swirl	Rhubarb Smash	
Elderflower Spritz	Dragon Fruit	Tropic Breeze	Lemon Spritz	Cosmic Dust	Tropic Spritz	
Apple Blossom	Citrus Burst	Lime		Zesty Citrus	Cloudberry Sour	
London Flair	Mellow Mango	Spicy Pineapple				

Altria	SHIRO	SWISHIER	IMPERIAL BRANDS	JTI
on!	SHIRO	ROGUE	skruf • ZONE	NORDIC SPIRIT
Lemon Berry	Tropical Passion	Honey Lemon	SOLBÄR	Bergamot Wildberry
Tropical Spice	Sour Lime	Mango Berry	BJÖRNBÄR	Berry & Stripes
Citrus Berry	Bergamot Mellow	Berry Apple	Red Rhuby	Strawberry
	Sour Red Berry		Cassice	Berry Citrus
				Melon Square
				Watermelon

Mint/Menthol and “Ice” Flavoured Nicotine Pouches by Transnational Tobacco Companies

Most nicotine pouch cans convey menthol/mint properties via the use of white, blue, and green colours either covering the background or the printed product name. (See Tables 3 and 4 below). While some products are named by mint flavours (Peppermint, Spearmint, Wintergreen), many of the flavour names contain descriptors (e.g., Ice, Fresh, Cool, Frost, Freeze, Chill) to denote the cooling sensation produced by the nicotine pouch. Many of the “Ice” flavours contain non-menthol cooling agents.

Table 3. Mint/Menthol Nicotine Pouch Flavours

BAT VELO	Swedish Match. ZYN VOLT THUNDER Swave	Altria on!	SHIRO SIRIUS	SWISHER ROGUE	IMPERIAL BRANDS skruf ZONE X	JTI NORDIC SPIRIT
<p>Polar Mint Peppermint Ice Cool Spearmint Easy Mint</p> <p>Mint Artic Frost Winter Chill X-Freeze Wintergreen</p>	<p>Green Mintini</p> <p>Spearmint Breeze Midnight Mint Cool Crisp</p> <p>Cool Mint Frosted Deep Freeze Black</p> <p>Menthol Cool Mint Peppermint Wintergreen Spearmint Ice Mint Freeze Mint</p>	<p>Spearmint Sweet Mint Smooth Mint Mint Wintergreen</p>	<p>Fresh Mint Tingling Mint Cooling Mint Sweet Mint True North</p> <p>Ice Cold</p>	<p>Peppermint Spearmint Wintergreen</p>	<p>Cold Blast Mint Breeze</p> <p>Frozen Shot Polar Fresh Max Fresh Ultra</p>	<p>Smooth Mint Spearmint</p>















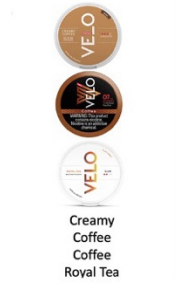








Table 4. Fruit & Mint/Menthol (“Ice”) Nicotine Pouch Flavours

BAT VELO	Swedish Match. ZYN VOLT THUNDER Swave	Altria on!	SHIRO SIRIUS	SWISHER ROGUE	IMPERIAL BRANDS skruf ZONE X	JTI NORDIC SPIRIT
<p>Berry Frost Hugo</p>	<p>Dark Frost Apple Mint</p> <p>Frosted Apple Dark Frost Mystic Blue Deep Freeze Twisted Berry</p>		<p>Cold Classic</p>		<p>Berry Fresh Havana Breeze</p>	

Other Flavoured Pouches by Transnational Tobacco Companies

Aside from the most popular flavours (Fruit, Fruit Ice, Mint/Menthol), transnational tobacco companies offer a wide variety of other nicotine pouch flavours, particularly those named for alcoholic beverages, coffee/tea, and spiced flavours targeted to specific cultures. Unlike other tobacco products, tobacco flavour is a rarity among nicotine pouches. (See Table 5 below).

Table 5

	BAT VELO	Swedish Match ZYN VOLT THUNDER Swave	Altria on!	SHIRO	SWISH ROGUE	IMPERIAL BRANDS skruf ZONE	JTI NORDIC SPIRIT
Spice/ Regional Flavor 	 Liquorice Elaichi Blast Paan Rush Exotic Clove Cinnamon Eucalyptus Tokyo Zing Wild Lavender Krauter Mix Yellow Root	 Nothingness Cinnamon Heat Cinnamon Northern Woods Ginger Blood Orange	 Cinnamon Licorice	 Smooth Liquorice Spiced Blonde	 Cinnamon	 Nordic Dark Flow Hot Beat	 Elderflower
Alcohol 	 Caribbean Spirit Coconut Blast Gin Tonic Amaretto	 Bellini Sparkles Cuba Libre Mojito Sun Daiquiri Aviation	 Spicy Margarita	 Mojito Pina Colada Cuba Libre			
Coffee & Tea 	 Creamy Coffee Coffee Royal Tea	 Java Shake Espresso Coffee	 Cafetini Coffee				 Mocha
Tobacco 		 Chill Smooth Gold	 Taste of Tobacco Original	 Virginia Classic		 Original	

Advertisements of Alcohol Flavoured Nicotine Pouches by Transnational Tobacco Companies

Advertisements for alcohol-flavoured nicotine pouches span numerous drinks including: Mojito, Cosmo, Amaretto, Gin & Tonic, Martini, Cuba Libre, Mint Julep, Bourbon, Witch’s Brew, Devil’s Breath, Poison Appletini, and Beer. (See Table 6 below). Youth may be drawn to these alcohol-flavoured nicotine pouches as it allows them to transgress two taboos with a single action, thereby fulfilling the adolescent desire to feel older than their chronological age while rebelling against boundaries of adult authority.

Table 6

<p>BAT</p>				
<p>Swedish Match</p>				
<p>Imperial Tobacco</p>				
<p>PHILIP MORRIS</p>				

Candy Flavoured Nicotine Pouch Brands

A variety of candy flavoured nicotine pouches were identified on the United Kingdom and European markets, but can be purchased and shipped elsewhere. (See Fig. 4 below). These obviously youth-oriented flavour varieties tend to be marketed by small start-up concerns. The manufacturer of Candys “Sweet Nicopods,” with 32.8mg/pouch, is listed as the “Candy Shop.” We were unable to locate a manufacturer under this name.

Fig. 4



<https://londonpods.co.uk/nicotine-pouches/>

Candy flavoured, high concentration nicotine pouches sold in the United Kingdom (See Fig. 5 below) include: Jolliez Grape 80mg, Jolliez Cherry 100mg, Candy Shop Pina Colada 80mg, Candy Shop Strawberry and Cream 80mg, Jolliez Green Apple 150mg. It is unclear if the nicotine represents the total per can or the concentration per pouch.

Fig. 5



<https://thepodblock.co.uk/>

Some nicotine pouch vendors directly copy the brand names and imagery from popular candy products, presumably without the permission of the candy company. (See Fig. 6 below). Clearly, these create an attractiveness to children who may eat them thinking they are a sweet treat. What is especially concerning is that these are very high nicotine products, labelled as a 120mg. Should a young child consume these products, a potentially lethal nicotine overdose may occur, as has been observed following flavoured e-liquid ingestion.(19) Millions nicotine pouch manufacturer is listed on the can as IP Prokopen D.A., Simferopol, Crimea, in Russian-occupied Ukraine. The producer of Nerds nicotine pouch is listed as “Snooze Nicopods.” We were unable to locate a manufacturer under this name.

Fig. 6



Local Flavour Offerings of the Major Brands of Transnational Tobacco Companies

Purveyors of nicotine pouches sometimes adopt their flavour offerings to align with regional taste preferences. (See Fig. 7 below). In Pakistan and Indonesia, for example, VELO introduced local flavours to appeal to consumers. In July 2022, Velo Pakistan launched “The Eastern Mix,” which was described on the website as “an exclusive range of flavours carefully drawn and curated to match that local palette.”(20) The new nicotine pouches characterizing flavours were elaichi (cardamom), star anise, and paan (betel leaf). Betel nut or leaf chewing, also known as areca nut, is popular in South Asia.(21) VELO’s Paan Rush flavour emulates a popular smokeless combination of betel nut and tobacco. Betel nut leaves are featured in the Paan Rush advertisement. VELO’s Paan Rush is described as an “Eastern Mix” for “your ethnic fusion moments.” In Pakistan and Indonesia, three of the five flavours offered were locally adapted flavours (December 2022).












Fig. 7



Concept Flavoured Pouches by Transnational Tobacco Companies








While most nicotine pouches carry flavour names descriptive of their taste, others employ so-called “concept flavours” for which the flavour is ambiguous. (See Tables 7 and 8 below). Proliferation of concept flavours is likely an effort by the industry to divert regulatory attention from their marketing of sweet and fruity flavoured tobacco products.(22,23) Examples of concept flavour names offered by the major transnational tobacco companies include: Spiced Blonde, Cosmic Dust, Cosmic Blast, Midsummer Night, Northern Woods, Hugo, Thunder Black, Havana Breeze, Tokyo Zing, Red Surfer, and Stark. The boxed text gives the company website provided flavour description. The central image of the woman in green comes from a Zone X advertisement on Instagram.

Table 7

			
bergamot & rose oil	elderflower & peppermint	ginger & lemon	menthol
			
sour berries, citrus & a hint of vanilla	lime, lemon & mint	banana, pear, raspberry & blackcurrant	
			
watermelon & mint	woody taste	tropical fruits & spicy tones	red berries & vanilla

List of Concept Flavoured Nicotine Pouch Names by Transnational Tobacco Company

Table 8. Company website flavour characteristics. Fruits and berries predominate.

Company	Brand	Flavor Concept Name	Description
		Summer Vibes	pina colada
		Hugo	elderflower & peppermint
		London Flair	cucumber & black pepper
		Kräuter Mix	herbs inspired by Swiss Alps
		Urban Vibe	fruit & energy drink
		Royal Purple	red grape
		Royal Violet	berries
		Tokyo Zing	ginger & lemon
		Caribbean Spirit	pina colada
		Tomorrowland	eucalyptus
		LYFT	Just Bloom
	ZYN	Northern Woods	woody taste
	THUNDER	Black Max	licorice
	Swave	Red Surfer	sour berries, citrus, hint of vanilla
		Factory Batch	citrus fruits, sour red berries, vanilla
	VOLT	Cosmic Dust	banana, pear, raspberry, blackcurrant
		Big Bang	cherry, almond, clove, cinnamon, black pepper
		Red Swirl	strawberries, vanilla, mint
Mystic Blue		blueberries, vanilla, peppermint	
		Nothingness	metallic, cool smokey taste, hints of salmiac
	skruf ●	TRANBÄR	cranberry
		SOLBÄR	blackcurrant
		BJÖRNBÄR	blackberries & mint
		Cassice	blackcurrant & mint
		Nordic	licorice
		Stark	citrus & rose oil
		Red Rhuby	rhubarb
	ZONE X	Dark Flow	licorice
		Cosmic Blast	red berries & vanilla
		Sunset	blood orange & grapefruit
		Havana Breeze	lime, lemon, mint
		Hot Beat	lime fruits with Sriracha
	SHIRO	Spiced Blonde	banana, spicy ginger
	SIRIUS	-	-
SWISHER	ROGUE	-	-
	on!	-	-
	NORDIC SPIRIT	-	-

Unflavoured Nicotine Pouches by Transnational Tobacco Company Brands

On! names its unflavoured nicotine pouches Original, whereas ZYN calls theirs Smooth and Chill. ZYN’s Smooth is described as “an unflavoured experience” while Chill is described as a “refreshing unflavoured experience.” (See Fig. 8 below)The term “refreshing” has the clear implication that a cooling agent has been added.(24) Depending upon the regulation which applies, cooling agents may be considered a characterizing flavour and thus prohibited.(25,26) These two unflavoured brands are especially promoted in localities which restrict the sale of flavoured tobacco products.

Fig. 8



In the fall of 2022, Swedish Match, maker of ZYN pouches, made a public appeal to Californians to vote against Proposition 31, which sought the removal of all flavoured products from the market. Arguing that prohibiting flavours from tobacco products would be “sweeping, unnecessary restrictions” Swedish Match urged the citizens of California to vote against the initiative (see Fig 4 below). Remarkably, Swedish Match explained that its opposition was based upon the company advocating for the health of Californians. “By voting NO on Prop 31, we can protect the health and well-being of all Californians. Let’s do what’s best for our state and reject this harmful proposition.” The company claimed that Proposition 31 would be “. . . doing nothing to curb youth usage rates and quite possibly increasing the rate of youth smoking.” Proposition 31 passed with a large majority of voters in favour (63.4% Yes, 36.6% No).

Fig. 9

**VOTE NO ON PROP 31
ON NOVEMBER 8TH!**

Voting NO on Prop 31 is the right choice for California. This controversial proposition proposes sweeping, unnecessary restrictions on tobacco and nicotine products in the state, making it illegal for California stores to sell all flavored snus, smokeless tobacco and nicotine pouches like ZYN. While these products are already illegal to sell to those under the age of 21 in our state, Prop 31 unfairly targets legal adult users with extra restrictions while doing nothing to curb youth usage rates and quite possibly increasing the rate of youth smoking.

Three separate university studies have shown that similar bans implemented in cities like San Francisco have been ineffective and failed to keep kids away from tobacco, instead causing a rise in cigarette use among young people.

There are other, more effective ways to protect youth from tobacco. By voting NO on Prop 31, we can protect the health and well-being of all Californians. Let's do what's best for our state and reject this harmful proposition.

VOTE NO ON NOVEMBER 8TH!

ZYN | NICOTINE POUCHES

Exploiting Cigarette Flavour Bans

LYFT's post-menthol market removal effort to recruit menthol smokers via Instagram video.

Fig. 10

**SAYING GOODBYE TO
MENTHOL CAN BE HARD**

**WHO SAID EASY MINT
CAN'T BE THE NEW MENTHOL?**

13+ Ej under 18 år. Denna produkt innehåller nikotin som är ett mycket beroendeframkallande ämne.

Colored Nicotine Pouches

Nicotine Pouch Colors: In a marked variation from “White” pouches traditionally associated with nicotine pouches, BAT’s VELO introduced colored nicotine pouches with the color of the pouch intended to convey the flavor within. (See Fig. 11 below).

Fig. 11



Whimsical Flavoured Nicotine Pouches by Transnational Tobacco Companies

As part of their social media promotions, both VELO and ZYN created fictitious nicotine pouch flavours which they posted on Instagram and Facebook on April Fool’s Day. (See Fig. 12 below). For example, VELO promoted whimsical Buffalo Wings and Smoked Salmon, while ZYN posted with a fanciful Sushi flavoured pouch. Interestingly, both VELO and ZYN chose to post improbably flavoured “Deviled Egg” nicotine pouches.

Fig. 12



<https://www.instagram.com/p/Cbz00G8tIPc/>

Capsule Flavoured Pouches, which Deliver a Burst of Flavour when Crushed

Nicotine pouch purveyors are continuously innovating their means of delivering more intense flavour to their consumers. Over the last decade, tobacco companies have introduced cigarettes with a crushable flavour-enhancing sphere embedded in the filter.(27) Applying this concept to pouches, Lucy and Kapz brands offer a capsule designed to be squeezed to enhance flavour intensity. (See Fig. 13 below). The Kapz brand suggests biting the nicotine pouch between the teeth to quickly release the capsule contents, or allowing it to dissolve gradually when placed in the usual position under the lip. Described as a “breakthrough in pouch technology,” Lucy portrays its “Breakers” as having a “jewel-like capsule that can be broken to release a flood of extra-flavour and hydration, whenever you choose.”(28)

Fig. 13



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